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Weather survey for Scotland's roads

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The task of keeping major roads open throughout Scotland during winter is to receive a boost this year. The Met Office is undertaking road temperature surveys using a vehicle fitted with specialist instruments with data from the surveys helping research into verifying new road weather forecasting techniques.

Based at RAF Lossiemouth in Moray, the research vehicle will survey a number of trunk roads including the A9 and A835 as well as urban routes around Edinburgh.

The survey car is equipped with instruments that measure air and road-surface temperature, as well as cloud cover, with readings taken at regular intervals along the route. Onboard GPS provides a precise location for each measurement.

For many years the Met Office has provided specialist weather forecasts to local authorities and trunk road operators responsible for winter road maintenance. Accurate forecasts of road-surface temperature and wintry weather helps road engineers plan when to salt the roads to prevent ice forming or deploy ploughs to clear snow.

Traditionally these forecasts have been for an area or region which may contain many routes.

Now, the Met Office is developing the next generation of road forecasts providing high-resolution modelling of road conditions every kilometre. These forecasts incorporate local effects such as shading of roads by trees and valley floors where cold air accumulates, which builds a dynamic picture of a particular road.

Gary Holpin, Transport Business Development Manager at the Met Office said: "Forecasts for individual roads represent a big step forward in forecasting for road authorities. Being able to focus on weather 'hotspots' means that precious resources can be precisely targeted, saving time, effort and money."

The drivers of the survey cars are all Met Office scientists or experienced meteorologists, many of whom work at RAF airfields across Scotland including RAF Lossiemouth, RAF Leuchars and RAF Kinloss.